

## **REMARKS/ARGUMENTS**

### **1.) Claim Amendments**

The Applicants have amended claim 3. Accordingly, claims 1-28 are pending in the application. Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

### **2.) Examiner Objections - Claims**

The Examiner objected to claim 3 because of the "claim I" recited in line 1. The Applicants have amended the claim as suggested by the Examiner. The Examiner's consideration of the amended claim is respectfully requested.

### **3.) Claim Rejections – 35 U.S.C. § 102(e)**

The Examiner rejected claims 1, 2, 9-14 19-23 and 26-28 under 35 U.S.C. § 102(e) as being anticipated by Yu, et al. (US 2004/0076239). Applicant respectfully traverses the rejection. Yu discloses a method and apparatus for tracking a residual frequency offset that includes: (a) upon receiving a digital signal, determining a pilot from the values of data and known pilot data to be added, and adding the determined pilot to the leading part of the data; (b) performing a cyclic prefix for copying a part of the frame portion of the data after a block in the units of a block having a fast Fourier transform (FFT) size and adding it before the block, generating a preamble to construct one frame structure, providing a channel effect to the generated transmission frame, and sending the transmission frame; (c) eliminating a cyclic prefix (CP), processing signals received in the units of the FFT block, extracting the preamble, and performing an initial channel estimation; (d) updating a channel estimate with a determined compensation constant and an average phase of pilots, and performing channel compensation using the updated channel estimate; and (e) receiving a pilot portion output after the channel compensation, calculating an average phase of all the pilots in one FFT block, updating the channel estimate, performing an inverse fast Fourier transform (IFFT) operation using the data and the pilot, extracting the data, and recovering the original digital signal from the extracted data. Simply stated, Yu discloses an estimation of the residual

frequency offset based on average phase of pilots. In the present invention, the impulse response of the dispersive channel is estimated applying bias to the initial channel estimate. Hence, the present invention is clearly distinguishable from Yu. Therefore, the allowance of claims 1, 2, 9-14 19-23 and 26-28 is respectfully requested.

**4.) Claim Rejections – 35 U.S.C. § 103(a)**

The Examiner rejected claims 3-8, 15-18, 24 and 25 under 35 U.S.C. § 103(a) as being unpatentable over Yu in view of Magee (US 2003/0076904). As noted above, Yu discloses an estimation of the residual frequency offset based on average phase of pilots. In the present invention, the impulse response of the dispersive channel is estimated applying bias to the initial channel estimate. Magee fails to overcome the deficiencies of Yu. Therefore, the allowance of claims 3-8, 15-18, 24 and 25 is respectfully requested.

**5.) Prior Art Not Relied Upon**

In paragraph 9 of the Office Action, the Examiner stated that the prior art made of record and not relied upon is considered pertinent to the Applicants' disclosure. None of the cited references, alone, or in combination, disclose nor suggest the claimed invention.

**CONCLUSION**

In view of the foregoing remarks, the Applicants believe all of the claims currently pending in the Application to be in a condition for allowance. The Applicants, therefore, respectfully request that the Examiner withdraw all rejections and issue a Notice of Allowance for claims 1-28.

The Applicants request a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,



Michael Cameron  
Registration No. 50,298

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Ericsson Inc.  
6300 Legacy Drive, M/S EVR 1-C-11  
Plano, Texas 75024

(972) 583-4145  
michael.cameron@ericsson.com